

Mar 2023

Assembly Part Description Update

Gates Carbon Drive is updating our assembly Part Descriptions for our eBike spider assemblies. The previous method is not able to correctly handle the expansion of necessary options. References to specific belt lines will be removed from the descriptions and be replaced with a convention that describes the parts of the assembly. This change will also allow for an accurate belt line calculation using only the Part Description, Drive Unit Mounting Plane, and any OE Drive Unit Offset.

Example New Part Number:
S4B4BM+9.0 42CDX -3.1 BG

Mounting Interface / Spider Offset / Tooth Count / Product Line / Sprocket Orientation / Guard Option
S4B4BM +9.0 42 CDX -3.1 BG

Calculation of Actual Beltline:

Most applications do not require a frame bracket offset, but some will. Examples are provided below for both circumstances:

(Drive Unit Mounting Plane) + (OE Drive Unit Offset) + (Spider Offset) + (Sprocket Orientation) = Actual Beltline

Bosch GEN4 example, Centered Drive Unit:

$$39.5 + (-0) + 9.0 + (-3.1) = \underline{45.4\text{mm}}$$

Bosch GEN4 example, -3.0mm Drive Unit Offset (toward non-drive side)

$$39.5 + (-3.0) + 9.0 + (-3.1) = \underline{42.4\text{mm}}$$

Actual Belt Lines vs. Nominal Belt Lines

Gates will continue to reference “Nominal Beltline” rather than “Actual Beltline” in literature. This is due to the large variety of products available, and small differences that sometimes exist. For example, the 45.4 Actual Beltline above is referenced as a 45.5mm Nominal Beltline in the Gates Carbon Drive [Assemblies Module](#). The Drive Unit Mounting Plane is now also listed on each motor page:

BOSCH “GEN4” SPIDER ASSEMBLY CHART				
COMPATIBLE HUBS	REAR SPROCKET TYPE	NOMINAL BELTLINE	FRONT SPROCKET TEETH	CENTERED NODE ASSEMBLY PART NUMBER
			39	<div style="border: 1px solid red; border-radius: 50%; padding: 2px; display: inline-block;"> Mounting Plane: 39.5 mm </div> S4B4BM+9.0 42CDX -3.1 BG

Product Numbers for the assemblies will not change. Customers can continue to order the same assemblies with their current Product Number. The old Part Description will also be included in the price list for reference while we make this transition.